

SOV/135-59-6-1/20

Modification of Weld Metal in Welding Aluminum

ing to which the modifying elements are introduced by alloying. Table 3 shows the chemical structure of this alloy. A variant of this method is the introduction of the modifying elements by flux, the chemical structure of which is shown in Table 4. The mechanical features of the seams are discussed. Figures 9 and 10 represent the results of the mechanical investigations in a graph. The results are given according to GOST 6996-54. The author states the results of the experiments: The preliminary theoretical conditions of the experiment make it possible to define the modifying process under certain conditions of crystallizing weld metal. The methods of introducing modifying elements into the welding tub are enumerated. There is shown the structure of the modifying elements of fluxes for automatic welding of aluminum. The dependence is stated of the size of the grains and the mechanical features of melted metal on the quantity of the modifier which has been introduced into the seam. There are 2 diagrams, 4 graphs, 12 photographs, 3 tables and 8 Soviet refer-

Card 2/3

SOV/135-59-6-1/20

Modification of Weld Metal in Welding Aluminum  
ences.

ASSOCIATION: Moskovskiy aviatsionnyy tekhnologicheskiy institut (Moscow Aviation Technological Institute)

Card 3/3

BOBROV, G. V., Cand Tech Sci (diss) -- "Modification of the seam metal in melt welding". Moscow, 1960. 17 pp (Min Higher and Inter Spec Educ RSFSR, Moscow Aviation Tech Inst), 150 copies (KL, No 10, 1960, 130)

1.2300

89667  
S/135/61/000/003/003/014  
A006/A001

AUTHORS: Alov, A. A., Professor, Doctor of Technical Sciences, Bobrov, G. V.,  
Candidate of Technical Sciences, Shmakov, V. M., Engineer

TITLE: On the Nature of Gas Pore Nucleation in Weld Joints

PERIODICAL: Svarochnoye proizvodstvo, 1961, No. 3, pp. 9-10

TEXT: The nucleation and development of pores in weld joints proceeds during crystallization of the metal and is connected with the formation of gases in the metals or with their liberation out of the solution. The development of gas pores starts with the appearance of microscopic nuclei in the liquid metal. In low carbon "rimming" steel, a higher degree of oversaturation of carbon and ferrous oxides is developing during crystallization, entailing the reaction  $C + FeO = Fe + CO$ . The carbon monoxide which is not soluble in the steel forms the micro-bubble nucleus. Hydrogen plays an important part in the formation of pores in welds. The authors investigated peculiarities of hydrogen occurrence in metals which show that certain energetic conditions, such as high oversaturation, are required for the liberation of hydrogen and the formation of microbubbles during solidification of the metal. However, if there are flaws in the metal,

Card 1/4

89667

On the Nature of Gas Pore Nucleation in Weld Joints

S/135/61/000/003/003/014  
A006/A001

the hydrogen may penetrate into the metal by diffusion and convert into the molecular form. The partial pressure of hydrogen in the flaw will be determined by external conditions, temperature and hydrogen concentration in the metal. To check the regularities in the development of pores, due to flaws in the base metal, special tests were performed. At the edges of aluminum, AMg6 (AMg6) and 7M435 (EI435) alloy plates, thin channels were drilled. Aluminum and AMg6 plates were rolled so that the channels were tightly pressed together. In the EI435 plates the channels were compressed by local deformation. The experimental plates were butt welded in argon with consumable electrodes of an analogous metal. In all cases the flaws caused pore formation. During the crystallization of liquid metal, shrinkage takes place. If pure metals or alloys with a narrow temperature range of crystallization, are crystallizing, concentrated shrinkage cavities are mainly formed in the ingot. At a larger crystallization range, dispersed internal dendritic and interdendritic shrinkage porosity will mainly develop. (Ref. 4). The relatively high crystallization rate of the metal during welding and the development of dendrites from the surface of partially fused grains, entail the intensified growth of axes of the first order. Therefore metal crystallization in the interdendritic spaces is retarded. Metal shrinkage in these spots will be impeded by the dendrites. Evidently, microscopic cavities may form between the dendrites, the more at a larger crystallization range of the

Card 2/4

## On the Nature of Gas Pore Nucleation in Weld Joints

89667  
S/135/61/000/003/003/014  
A006/A001

alloy. The microcavities are filled with dissolved metal vapors or gases. Partially, hydrogen will diffuse in the cavities, converting into the molecular form. The development of micropores into visible pores depends in the first place on the hydrogen concentration in the surrounding metal and the partial pressure of hydrogen in the pore. When welding aluminum, the partial hydrogen pressure in the bubble during its formation is close to 1 atm. It can be assumed that only at a hydrogen concentration in aluminum over  $0.036 \text{ cm}^3/100 \text{ g}$ , the microcavities can develop into visible pores. An editorial note says that these data are different from those given by G. D. Nikiforov and A. G. Makhortova ( $0.69 \text{ cm}^3/100\text{g}$ ) which seem to be more correct. Most favorable conditions for the development of microcavities are in the mutual crystallization range, since the dendrite growth - axes of the first order - in these areas is most rapid. As a rule the nucleation of pores occurs in these very spots (Fig. 7). Finally the authors draw the following conclusions: The development of gas pores in welds starts from micronuclei, originating as a result of a) reactions with the formation of gases which are insoluble in the metal b) inter-dendritic and internal dendritic metal shrinkage. When welding steels micro-nuclei may arise as a result of the burning out of carbon, and of the metal shrinkage during crystallization as well. In the case when a reaction with the formation of insoluble gases does not take place during

Card 3/4

On the Nature of Gas Pore Nucleation in Weld Joints

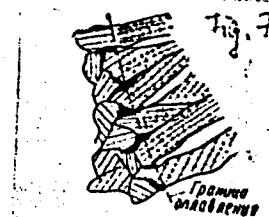
crystallization, micronuclei can only arise as a result of metal shrinkage.

Figure 7:

Development of pores from shrinkage micro-flaws.  
There are 8 figures and 4 Soviet references.

ASSOCIATION: MATI

89667  
S/135/61/000/003/003/014  
A006/A001



Card 4/4

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

BOBROV, G. V. (Engineer)

"Plasma dispersal of tungsten on graphite"

Report presented at the regular conference of the Moscow city administration NTO Mashprom, April 1963.

(Reported in Avtomaticheskaya Svarka, No. 8, August 1963, pp 93-95, M. M. Popekhin)

JPRS24,651 19 May 64

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

BOBROV, G.V.

Welding faculty begun on a voluntary basis. Svar. proizv. no.6:  
44 Je '64  
(MIRA 18:2)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

NIKIFOROV, G.D.; BOBROV, G.V.

Improving the qualification of welding engineers. Avtom. svar. 17  
no.7:96 Jl. '64.  
(MIRA 17:8)

L 8222-66 EWT(m)/EWA(d)/EWP(t)/EWP(z)/EWP(b) IJP(c) MJW/JD/JG

ACC NR: AP5026272

SOURCE CODE: UR/0226/65/000/010/0038/0046

AUTHOR: Andreyev, V. V. (Moscow); Bobrov, G. V. (Moscow); Polezhayev, M. A. (Moscow)

ORG: none

TITLE: Manufacturing parts from molybdenum by plasma spraying

SOURCE: Poroshkovaya metallurgiya, no. 10, 1965, 38-46

TOPIC TAGS: metal deposition, molybdenum deposition, molybdenum spraying, plasma spraying, deposited molybdenum structure, deposited molybdenum property, **MOLYBDENUM**

ABSTRACT: Tubular parts of various sizes and shapes were made of molybdenum by plasma arc spraying on AD-1<sup>1</sup> AMTs<sup>2</sup> or D16<sup>3</sup> aluminum alloy patterns. The spraying was done with a mixture of argon and helium in a 4 to 1 ratio. The deposits were annealed in a hydrogen atmosphere at 1200—1800C for 1—4 hr. The as-sprayed metal consisted of distinct layers of polycrystalline molybdenum interspersed with layers of nonmetallic inclusions and voids. Annealing at 1800C makes the layered structure less distinct and reduces the thickness of the interspersed layer, which then becomes similar to the grain boundaries of cast or wrought metal. Annealing at 1200—1400C, however, had no effect on the structure of deposited metal. A second phase, probably consisting of molybdenum oxides, was identified in the as-sprayed deposit. However, no second phase was observed after annealing at 1800C for 1 hr. The volume shrinkage of deposited molybdenum annealed for 2 hr at 1200, 1400, 1600, and 1800C was 1.0, 1.6, 5.8, and

Cord 1/2

L 8222-66

ACC NR: AP5026272

6.4%, respectively. The corresponding figures for the density were 8.50—8.89, 8.54—8.83, 8.66—8.98, and 9.05—9.35 g/cm<sup>3</sup>, compared with 8.76—8.95 g/cm<sup>2</sup> for as-sprayed metal. The tensile strength of the as-sprayed molybdenum, 3.1—5.6 dan/mm<sup>2</sup>, increased to 8.3—13.5, 18.4—20.1, and 30.1—31.9 dan/mm<sup>2</sup> after annealing at 1800°C for 1, 3, and 5 hr, respectively. The as-sprayed molybdenum had a hardness of 128—147.2 Hv; after annealing at 1800°C for 1, 3, and 5 hr, the hardness was 171.0 to 225.0, 121.7—153.2, and 119.0—135.0 Hv, respectively. Annealing at 1800°C greatly reduced the resistivity of deposit: from 31.8—33.8 mohm·cm for as-sprayed metal to 8.02 mohm·cm (80—85% of the resistivity of cast molybdenum) for metal annealed for 2 hr. Orig. art. has: 4 figures and 5 tables. [MS]

SUB CODE: 13, 11 / SUBM DATE: 06Mar65 / ORIG REF: 005 / OTH REF: 003 / ATD PRESS:

4148

BC  
Card 2/2

10.6120

2807.2207

88609

S/147/60/000/004/001/016  
E191/E281

AUTHOR: Bobrov, G. Ye., (Leningrad)

TITLE: On the Possibility of Utilising Aerodynamic Interference to Reduce the Wave Drag of Annular Wings in Supersonic Flow

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya tekhnika, 1960, No. 4, pp. 3-9

TEXT: The possibilities are examined of reducing the wave drag of annular wings in supersonic flow by means of the interference effect similar to that in the supersonic flow around a two-dimensional Busemann biplane. The linearised problem of the internal wave drag of an annular wing with a double wedge profile at zero incidence in a supersonic flow is solved. In this it is assumed that the wedge angles at the leading and trailing edges of the annular wing are small, the external surface of the annular wing is cylindrical and the viscosity of the gas can be ignored. The external flow is undisturbed and the internal flow alone has to be considered. This flow is described by the potential of the disturbance velocities for which an equation can be formulated in cylindrical co-ordinates together with

Card 1/3

✓

88609  
S/147/60/000/004/001/016  
E191/E281

On the Possibility of Utilising Aerodynamic Interference to Reduce the Wave Drag of Annular Wings in Supersonic Flow appropriate boundary conditions. The system of equations is solved by making use of substitutions of variables and an expression is found for the co-efficient of wave drag. Numerical values of certain terms in this expression are plotted as a function of certain parameters expressing the geometry of the annular wing and the Mach number of the undisturbed flow. It is found that a minimum of the wave drag for a given thickness of the profile occurs when the point of maximum thickness of the profile is halfway between the leading and trailing edges, in other words, in profiles which constitute the axial symmetry analogy of the Busemann biplane. It is shown that, thanks to aerodynamic interference between elements of the internal surfaces of the annular wing, its wave drag, when certain geometric and aerodynamic relationships are observed may drop to 3% only of the wave drag of the plane wing obtained by developing the annular wing into a plane. There are 5 figures and 2 references: 1 Soviet and 1 non-Soviet.

Card 2/7

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

BOBROV, I.

Leonardo invented it for Mona Lisa. Znan.sila 35 no.7:  
47 Jl '60. (MIRA 13:7)  
(Leonardo Da Vinci 1452-1519)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

BOBROV, I.; GIADZIJ, F.

Experience in using the millisecond method in blasting. p. 295.

RUDY. Praha. Vol. 2, no. 11, Nov. 1954.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, No. 3, March 1956.

BOBROV, I.

Aiming for a work without lagging crews. Sov.shakht. 11  
no.2:7 F '62. (MIRA 15:1)

1. Sekretar' Belovskogo gorodskogo komiteta profsoyuza  
rabochikh ugol'noy promyshlennosti SSSR.  
(Coal mines and mining--Labor productivity)

BOBROV, I.F.; KOLOMIYTSOV, M.D.; MAKHNO, Ye.Ya.; YUDIN, R.E.

Hydromechanical mining of thin steeply dipping coal seams. Ugol'  
Ukr. 6 no.11:14-15 N '62.  
(MIRA 15:12)

1. Leningradskiy gornyy institut,  
(Donets Basin—Hydraulic mining)

*BOROV, ZIANA RAZVITIYE*

GONCHARSKIY, Iuri Abramovich, kandidat tekhnicheskikh nauk; MAKSIMOVICH,  
Georgiy Grigor'yevich, kandidat tekhnicheskikh nauk; BOROV,  
Ivan Grigor'yevich; UDAL'TSOV, A.N., glavnyy redaktor; LEVIN, G.E.,  
kandidat tekhnicheskikh nauk, redaktor; KIRNOSOV, V.I., inzhener,  
redaktor; TOLCHINSKIY, Ye.M., inzhener, redaktor

[Gas discharge gauge used in longitudinal control. Thermal tensometer  
for measuring deformation of elements of models. Devices for determining  
deformations caused by measuring pressure using contact method]  
Gazorazriadnye datchiki prodol'nogo upravleniya. Teplovoi tensometr  
dlia izmerenija deformatsii elementov modeli. Prisposoblenie dlia  
opredelenija deformatsii, vznikaiushchikh ot izmeritel'nogo davlenija  
pri kontaktnom metode izmerenija. Tema 1, no.P-56-444. Moskva, 1956.  
21 p. (MLRA 10:5)

1. Moscow, Institut tekhniko-ekonomiceskoy informatsii.  
(Gauges)

BOBROV, Ivan IVANOVICH

DECEASED 1960

BOBROV, I.I., doktor tekhnicheskikh nauk; VOLKOV, A.K., kandidat  
tekhnicheskikh nauk.

Developing methods of preventing internal corrosion in tankers.  
Sudostroenie 23 no.3:58-60 Mr '57. (MLRA 10:5)  
(Tank vessels) (Corrosion and anticorrosives)

(1882-1960) abit. Sudostroyeniye, 26:6 p. 76 Je 1960.

BOBROV, I.I., inzh.; DOLGOPOLOV, V.M., inzh.; ZISMAN, L.M., inzh.;  
RAISEVICH, B.I., inzh.; MIKHAYLOV, A.P., inzh.

Recording frequency meter and power register device. Elek.sta.  
32 no.9:89-91 S '61. (MIRA 14:10)

(Frequency measurement)  
(Electric power plants-Equipment and supplies)

BOBROV, I.I., inzh. (Perm'); ZISMAN, L.M., inzh. (Perm')

Device for measuring and oscillographic recording the runaway  
angle of a synchronous generator. Elektrichestvo no.6:44-46  
Je '62. (MIRA 15:6)  
(Electric generators) (Electronic measurements)

BOBROV, I.I.; MORDUKHOVICH, I.L.

Mining without transportation with arbitrarily left coal pillars under the mine dump. Ugol' 37 no.5:30-31 My '62. (MIRA 15:6)

1. Ushakovskiy razrez (for Bobrov). 2. Institut gornogo dela im. A.A. Skochinskogo (for Mordukhovich).  
(Strip mining)

BOBROV, I.

Nov 52

USSR/Metallurgy - Casting, Methods

"Experience in Gear Casting by the Centrifugal Method," I. Bobrov, Chief Metallurgist and K. Smirnova, Head of the Cent Lab, Mytishchi Mach Bldg Plant

Za Ekon Materialov, No 4, pp 77-79

Discuss recent conversion from sand casting to centrifugal casting of gears at Mytishchi Mach Bldg Plant. New casting technology permitted reduction of rejection from 70% to 45% and achieved considerable savings in metal and molding materials.

Source #264T66

BOBROV, I. I.

USSR/Metallurgy - Steelmaking,  
Equipment

Jun 52

"Packed Lining for a Small Converter,"  
I. I. Bobrov, K. N. Smirnova, Engineers

"Litey Proizvod" No 6, pp 7, 8

States that in 1940 Mytishchi Mach Bldg Plant  
initiated use of packed lining instead of brick  
work, and during last war this type of lining  
for small Bessemer converters was introduced  
into industry. Describes prep'n of lining mixt.,  
and packing and drying procedure. Finds endur-  
ance of packed lining is higher by 5-10 blows  
than that of brick lining.

23OT36

Cart

BOURV, I. I., KAZANTSEV, A. V.

Founding

Practical design for gate runner funnel. Lit. proizv. No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

~~Bobrov, I. I.~~

## USSR/Miscellaneous - Industrial processes

Card 1/1 : Pub. 12 - 10/13

Authors : Bobrov, I. I.

Title : Ingotless drop-forging of parts from crystallizing metal

Periodical : Avt. trakt. prom. 4, 29-30, Feb 1954

Abstract : The nature of ingotless drop-forging of details from liquid ferrous or non-ferrous metal in a press under high or low-pressure, depending upon the quality and complexity of the details, is described. The yield of serviceable metal during ingotless drop-forging reaches 94-98% and the strength of such details is usually satisfactory. Drawing; illustration.

Institution : The Machine Construction Plant, Mytishchinsk

Submitted : .....

14927\* (Russian.) Crystallization of Liquid Steel Under Pressure. Kristallizatsiya zhidkoi stali pod davleniem. P. N. Bidulla, I. I. Bobrov, and K. N. Simirnova. Liteinor Proizvodstvo, 1950, no. 7, June 1950, p. 1-4.  
Equipment and methods. Advantages in comparison with ordinary cast and rolled steels.

BOBROV, I.I., inzh.; ZISMAN, L.M., inzh.

Transistorized universal phase-voltammeter. Elek. sta. 34  
no.7:63-66 Jl '63. (MIRA 16:8)

ZISMAN, L.M., inzh.; BOBROV, I.I., inzh.; DOLGOPOLOV, V.M., inzh.; RANSEVICH,  
B.N., inzh.

Central voltage regulator of a network for group excitation regulation  
of generators. Elek. sta. 34 no.11:93-94 N '63. (MIRA 17:2)

BOBROV, I.I., inzh.

Device for the self-synchronization of generators. Elek. sta. 36  
no. 10:78-81 O '65. (MIRA 18:10)

I 05095-67 EWT(d)/EWP(1) IJP(c) BB/GG  
ACC NRI AP6013301

SOURCE CODE: UR/0413/66/000/008/0097/0097

AUTHORS: Bobrov, I. I.; Ivanov, K. G.; Il'in, V. A.

54  
B

ORG: none

16C

TITLE: A method of depositing a printed winding on ferrite wafers of a memory cube.  
Class 42, No. 180852

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 97

TOPIC TAGS: storage device, printed circuit, computer memory, ferrite core memory

ABSTRACT: This Author Certificate presents a method for depositing a printed winding on ferrite wafers of a storage cube. The method increases the productivity of labor and simplifies the technological process. A negative picture of the winding is applied to the copper-coated ferrite wafer by printing with a polygraphic pigment and a deep steel stamped form. A galvanic silver plating of the printed winding is produced in an acid electrolyte. The pigment is removed, and the copper is etched away from the blank sections by an etching agent. The silver film of the winding is not destroyed.

SUB CODE: 09/ SUBM DATE: 19Nov64

Send 1/1 YC

UDC: 681.142.07.002.2

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

BOBROV, I. K.

"From the Experience With Conducting Education on Medical Matters in the Unit", Military-Medical Journal, No. 8, p 80, 1955.

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

MIKHEYEVA, Ye. N., starshiy inzh.; BOBROV, I.N., starshiy inzh.

Accomplishments in the work of the enterprise of communist labor.  
Avtom., telem. i sviaz' 5 no.5:17-19 My '61. (MIRA 14:6)

1. 2-ya L'vovskaya distantsiya signalizatsii i svyazi.  
(Railroads—Employees)  
(Railroads—Signaling)

BOBROV, I.V.

KUZ'MICH, A.S., redaktor; BARABANOVA, F.A., redaktor; BOBBROV, I.V., redaktor;  
VLADIMIRSKIY, V.V., redaktor; GRAFOV, L.Ye., redaktor; DOKUCHIN, A.V.,  
redaktor; YERASHKO, I.S., redaktor; ZABLUDSKIY, G.P., redaktor; ZAID-  
MIDKI, A.N., redaktor; ZAYTSEV, A.P., redaktor; ZASADYCH, B.I., redak-  
tor; KAGAN, F.Ya., redaktor; KRASNICKOVSKIY, G.V., redaktor; KRIVONOGOV,  
K.K., redaktor; LALAYANTS, A.M., redaktor; MELAMED, Z.M., redaktor;  
MINDEL, E.O., redaktor; MOGILEVSKIY, N.M., redaktor; OSTROVSKIY, S.B.,  
redaktor; POPOV, T.T., redaktor; SKOCHINSKIY, A.A., redaktor; SKURAT,  
V.K., redaktor; SOBOLEV, G.G., redaktor; STUGAREV, A.S., redaktor;  
SUMCHENKO, V.A., redaktor; TERPIGOROV, A.M., redaktor; SHEVYAKOV, L.D.,  
redaktor; SHELKOV, A.A., redaktor; ANDREYEV, G.G., tekhnicheskij redaktor

[Safety regulations in coal and shale mines] Pravila bezopasnosti v  
ugol'nykh i slantsevykh shakhtakh. Moskva, Ugletekhnizdat, 1953. 226 p.

(MIRA 8:4)

1. Russia (1923- U.S.S.R.) Ministerstvo ugol'noy promyshlennosti.  
(Coal mines and mining--Safety measures)

*BOBROV, I.V.*

BOBROV, I.V.; KRICHESKII, R.M.; MIKHAYLOV, V.I.; OSTROVSKIY, S.B.,  
redaktor; RATNIKOVA, A.P., redaktor; NADEINSKAYA, A.A., tekhnicheskiy redaktor

[Sudden coal and gas ejections in the Donets Basin mines] Vnezapnye vybrosy uglia i gaza na shakhtakh Donbassa. Moskva, Ugletekhizdat, 1954. 513 p. [Supplement: Systematization of sudden coal and gas ejections by mine. Tables 5, 8, 10, 14, 15, 16, 17, 18, 19, 22] Prilozhenie: Sistematisatsiya vnezapnykh vybrosov uglia i gaza po shakhtam. Tablitsy 5, 8, 10, 14, 15, 16, 17, 18, 19, 22.  
(Donets Basin—Mine explosions)

*BOBROV I.V.*

GALADZHIY, F.M., starshiy nauchnyy sotrudnik; BOBROV, I.V., kandidat tekhnicheskikh nauk.

Experience in conducting blasting operations with millisecond retardation.  
Ugol' 29 no.5:7-11 My '54. (MLRA 7:6)

1. MakNII. (Blasting)

*Bobrov, I.V.*

KOSOVICH, Vasiliy Iauk'yanovich; BOBROV, I.V., redaktor; GRICHAYENKO, M.I.,  
redaktor; ALADOVA, Ye.I., Tekhnicheskiy redaktor.

[Aids for mining specialists, foremen, and miners working in seams  
threatened by sudden discharges of coal and gas] Pochka dlia gor-  
nykh masterov i brigadirov, rabotayushchikh na plastakh, opasnykh po  
vnezapnym vybrosam ugli i gaza. Moscow, Ugletekhnidat, 1955, 82 p.  
(Coal mines and mining--Safety measures) (MIRA 9:4)

DODROV, I. V.

✓ 60. FURTHER INCREASE IN SAFETY (OF WORK) IN COAL MINING IS REQUIRED.  
Bobrov, I.V., "Ugol" (Coal, Moscow), Apr. 1955, 1-7). Safety research over  
the past 5-7 years at the Minsk coal Safety Research Institute is  
reviewed in six short sections: (1) Combating methane emission and improving  
mine ventilation. A coal sampler with a thermometric scaling device is  
described as well as an instrument for measuring gas pressure in a coal seam. (2)  
(2) Preliminary working of protective screens to reduce outburst of coal and gas.  
(3) "Parachute" device for braking in inclined haulage and research on deep-  
winding ropes. (4) Dust suppression and spraying with a wetting agent solution.  
(5) Improvements in portable methaneeters and recorders for carbon monoxide  
(0.001%) and carbon dioxide (0.1%). An experimental model of an acoustic  
pollutometer whose signal cuts off the power supply in dangerous concentrations  
is described. (6) Electrical protective devices and testing apparatus, and  
electronic remote control devices are described. (L) S.M.R.

BOBROV, I.V., starshiy nauchnyy sotrudnik; SHATILOV, V.A., starshiy nauchnyy sotrudnik.

Rock bursts during shaft sinking. Ugol' 30 no.11:28-32 ■ '55.

1. Makeyevskiy nauchno-issledovatel'skiy institut.  
(Earth movements) (Shaft sinking)

185. CHARTING COAL DUST DEPOSITED IN MINE WORKINGS BY TREATMENT WITH  
SODIUM HYDROXIDE SOLUTIONS. Gheorghita, S.G. and R.L. V. Gheorghita,  
1971, p. 37-39. Recorded from I.M.D. It is shown that the method  
of treatment of different types of impurities in coal-bearing  
minerals was effective in the removal of the dust.  
The efficiency of the method is 90%.

BOBROV, I.V., kandidat tekhnicheskikh nauk; SHATILOV, V.A., kandidat geologo-mineralegicheskikh nauk.

Sudden rock ejections during the sinking of vertical mine shafts in the Denets Basin. Besop.truda v prom. l no.8:20-22 Ag '57. (MLRA 10:8)

1. Makeyevskiy nauchno-issledovatel'skiy institut po bezopastnosti rabot v gornoy promyshlennosti.  
(Denets Basin--Shaft sinking)

BOBROV, I.V.

Increase in every possible way the labor safety of coal miners.  
Ugol' Ukr. 3 no.8:11-13 Ag '59. (MIRA 12:12)

I.Direktor Makeyevskogo nauchno-issledovatel'skogo instituta po  
bezopasnosti gornykh rabot.  
(Coal mines and mining--Safety measures)

*Bobrov, Ivan V*

(1)

BAZENOV, G. I., Institute of Geology and Refining of Petroleum, USSR Academy of Sciences (Section IV)  
Theory and laboratory modeling of fractured reservoir rocks with synthetic porosity (Section IV)

BENYOV, Ivan V., Kazakhstan Scientific Research Institute for Labor Safety in Mining Industries - "Study of gas outburst phenomena (Section III)"

BENOV, Ignatij O., Moscow State University Inc. M. V. Lomonosov Head, Chair, Geology and Geochemistry of Combustible Minerals - "Methods of comparative estimation of oil and gas occurrences possibilities" (Section IV)

BOGDANOV, Semyon A., Institute of Petroleum, Academy of Sciences USSR - "Soviet results in the field of sheet mining" (Section III)

BOGDANOV, A. F., Armenian Petroleum Institute - "Commercialization of sand fine into the wells and their application for oil production" (Section IV)

CHERNOV, Ivan A., North Caucasus Institute of Mining and Metallurgy - "Methods of increasing the rate of boring holes for exploration and exploitation in hard rocks" (Section II)

DANILOV, I. M., Geological Mining Institute - "Utilization of rock pressure and the microstructure of rock to facilitate mining" (Section II)

DANILOV, G. N., Moscow Institute of Nonferrous Metals and Gold Inc. N. I. Malina - "Technical results obtained in the Soviet Union at the exploitation of sulfide deposits" (Section II)

DANILOV, N. I., Moscow Geological Prospecting Institute Inc. S. Ordzhonikidze - "Full mechanism of the driving of mine roadway and prospecting drifts in the Soviet Union" (Section I)

DANILOV, Andrey P. - "Determination of the variation of stresses originating in wall rock masses" (Section I)

REPORTS TO BE SUBMITTED FOR THE XI WORLD CONGRESS, METALS AND METALLURGICAL SOCIETY,  
Budapest, Hungary, 12-15 Sep 1980

BOBROV, Ivan Vladimirovich; ZAYTSEV, A.P., retsenzent; CHERNOV, O.I.,  
retsenzent; KARPOV, A.M., otv. red.; RATNIKOVA, A.P., red.  
izd-va; BOLDYREVA, Z.A., tekhn. red.; PROZOROVSKAYA, V.L.,  
tekhn. red.

[Safe methods of carrying out development workings in seams  
subject to sudden outbursts of coal and gas] Sposoby bezo-  
pasnogo provedeniia podgotovitel'nykh vyrabotok na plastakh,  
opasnykh po vnezapnym vybrosam uglia i gaza. Moskva, Gos.  
nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 257 p.

(MIRA 15:2)

(Donets Basin—Mine gases)

BOBROV, I.V., kand.tekhn.nauk

Determining the location of possible coal and gas outburst.  
Ugol' Ukr. no.6:38-39 Je '61. (MIRA 14:7)

1. Makeyevskiy nauchno-issledovatel'skiy insitut.  
(Mine gases)

BABICHEV, N.S., kand.tekhn.nauk; BOBROV, I.V., zasluzhennyy deyatel' nauki i tekhniki USSR; ROSINSKIY, N.L., kand.tekhn.nauk; KRAMER, S.M., inzh.

"Boring and blasting operations" by P.IA.Taranov. Reviewed by N.S.Babichev and others. Ugol' 36 no.3:62 Mr '61. (MIRA 14:5)

1. Donetskiy industrial'nyy institut (for Babichev).
2. Makeyevskiy nauchno-issledovatel'skiy institut (for Bobrov, Rosinskiy).
3. Kombinat Stalinugol' (for Kramer).  
(Blasting) (Taranov, P.IA.)

KHODOT, V.V., doktor tekhn. nauk, red.; BOBROV, I.V., kand. tekhn. nauk, red.; RUDCHENKO, V.P., red.; TABAKOV, A.G., red.; SHCHUKIN, V.R., red.; KULIKOV, A.P., red.; ANDROSOV, M.S., otv. red.; SHEVYAKOV, F.D., otv. red.; POTAPOV, V.I., otv. red.; PREMYSLER, Yu.S., otv. red.; VINOGRADOVA, G.V., red. izd-va; IL'INSKAYA, G.M., tekhn. red.; BOLDYREVA, Z.A., tekhn. red.

[Control of sudden outbursts in coal mines; proceedings of the scientific and technical conference held in Donets in December 1960] Bor'ba s vnezapnymi vybrosami v ugol'nykh shakhtakh; sbornik trudov nauchno-tehnicheskogo soveshchaniia, sostoiavshegosia v gor. Donetske v dekabre 1960 g. Moskva, Gosgortekhizdat, 1962. 602 p. (MIRA 15:9)

1. Institut gornogo dela imeni A.A. Skochinskogo (for Khodot).
2. Kombinat "Donetskugol'" (for Rudchenko). 3. Gosudarstvennyy komitet pri Sovete Ministrov Ukrainskoy SSR po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru, Donetskij okrug (for Shchukin).

(Coal mines and mining--Safety measures)

BOBROV, Ivan Vladimirovich; KRICHENSKIY, Ruvim Markovich;  
RYZHENKO, I.A., kand. tekhn. nauk, retsenzent

[Combatting sudden outbursts of coal and gas] Bor'ba s  
vnezapnymi vybrosami uglia i gaza. Kiev, Tekhnika, 1964.  
327 p. (MIRA 18;3)

BOBROV, I.V., doktor tekhn. nauk

Causes of rock outbursts during workings in Donets Basin mines.  
Ugol' Ukr. 10 no. 1:46-47 Ja '66. (MIRA 18:12)

1. Makeyevskiy nauchno-issledovatel'skiy institut po bezopasnosti  
rabot v gornoj promyshlennosti.

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

BOBROV, I.YA

VOZNESENSKIY, V. L. AND I.YA. BOBROV.....Vladimirskii Krai; obzor narodnogo  
khoziaistva Vladimirskei gub. Vladimir, 1928. 147 p. (Vladimirskii gubernskii  
otdel narodnogo obrazovaniia.)  
"Spisok ispol'zovannoii literatury": p. (148)

DLC: DK511.V6V69

SO: LC, Soviet Geography, Part II, 1951/Unclassified

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

BOBROV, K.

Crosswise circulation of water in river courses. p. 686.  
TEHNIKA, Beograd, Vol. 10, no. 5, 1955.

SO: Monthly List of East European Accessions, (EEL), LC, Vol. 4, no. 10, Oct. 1955,  
Uncl.

SOURCE CODE: UR/0413/66/000/010/0097/0097

INVENTOR: Bobrov, K. A.; Zibin', D. K.

ORG: None

TITLE: A pulse counter, Class 42, No. 181876 [announced by the VEF State Electrical Engineering Plant (Gosudarstvennyy elektrotekhnicheskiy zavod VEF)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 10, 1966, 97

TOPIC TAGS: flip flop circuit, pulse counter, coincidence circuit

ABSTRACT: This Author's Certificate introduces a pulse counter containing a tri-stable flip-flop and two bistable flip-flops connected in series. The unit is designed for producing eleven states in 1-2-3-5 code. The counter input is connected to the counter input of the tristable flip-flop with simultaneous connection through a diode to the auxiliary set terminal for the second digit on this flip-flop. The second input of the diode is connected to the output of a coincidence circuit with inputs tied to the last digit of the tristable flip-flop, the second digit of the first bistable flip-flop and the first digit of the second bistable flip-flop.

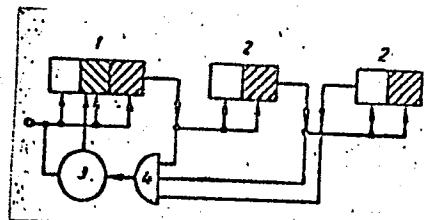
Card 1/2

UDC: 681.142.07

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

ACC NR: AP6017992



1--tristable flip-flop; 2--  
bistable flip-flops; 3--diode;  
4--coincidence circuit

SUB CODE: 09 / SUBM DATE: 10Apr65

Card 2/2

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

BOBROV, Konstantin, ing. (Beograd, Banijska 24)

Complex regulation of Velika Morava. Tehnika Jug 16 no.11:1933-1937  
'61.

1. Savetnik u Projektantskom zavodu rečnog saobraćaja, Beograd.

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

BOBROV, Konstantin, inz. (Banijska 24, Beograd)

The Rhine-Main-Danube Rivers Canal. Brodarstvo 4 no.14:605-608  
Ja-Mr '62.

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

*BOBROV, K. L.*

BEN'YAMINOVICH, I.M., inzhener; BOBROV, K.L., inzhener; CHEREPAKHIN, N.D.

Experience in protecting the base against freezing in building foundations. Stroi.prom. 32 no.9:29-31 S '54. (MIRA 7:11)

1. Trest Tagilstroy (for Cherepakhin)  
(Foundations) (Building--Cold weather conditions)

RAPOPORT, Zusya Goselevich; BOBROV, Konstantin Yevgen'yevich;  
MATLIN, I.I., red.; MEDNIKOVA, A.N., tekhn. red.

[Materials for repairing radio equipment] Materialy dlja  
remonta radiosredstv; kratkii spravochnik. Moskva, Voen-  
izdat, 1962. 255 p. (MIRA 15:10)  
(Radio-Equipment and supplies)

BOBROV, L.

Retracing the tracks of disasters in logic. Tekh. mol. 30  
no.12:14-16 '62. (MIRA 16:1)

(Logic, Symbolic and mathematical)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

BOBROV, L., nauchnyy sotrudnik

Five steps into the kingdom of Pluto. Tekh. mol. 29 no.12:  
34-36 '61. (MIRA 15:1)  
(Earth—Internal structure)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

BOBROV, L.

Individual approach to the "unyielding." Tekh.mol. 31 no.2:30  
'63. (MIRA 16:6)

(Fluoroplast)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

BOEROV, L.

Chemistry of the emotions. Tekh. mol. 31 no.8:35-36 '63.  
(MIRA 16:11)

\*

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

BOBROV, L.

From historic bridges to the canals on Mars.Tekh.mol. 31 no.9:32-  
34 '63. (MIRA 16:9)

(Graphic methods)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

BOBROV, L.

Peak over a spectrogram. Znan.-sila 38 no.2:28-29 F '63.  
(MIRA 16:3)  
(Helium) (Atmosphere, Upper)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

BOBROV, Lev

Space in a test tube. Znan.-sila 37 no.9:18-20 S '62.  
(MIRA 15:12)  
(Meteorites)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

EMME, A.; BOBROV, L.

Instinct instead of compass. Znan.-sila 37 no.8:36-38 Ag '62.  
(MIRA 16:5)  
(Animal intelligence)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

STARIK, I.; BOBROV, L.; SHUKOLYUKOV, Yu., kand.khim.nauk

Atomic calendar of a planet. Tekh.mol. 31 no.1:34-36 '63. (MIRA 16:3)

1. Chlen-korrespondent AN SSSR (for Starik).  
(Geological time) (Radioisotopes)

USSR/Cultivated Plants - Potatoes. Vegetables. Melons.

M

Abs Jour : Ref Zhur Biol., № 12, 1958, 53614

Author : Bobrov, L., Bubentsov, S.

Inst : Kazakh Institute of Agriculture

Title : Mountain Potato Seed Growing

Orig Pub : S. kh. Kazakhstan, 1957, № 4, 54-56

Abstract : The expedition of the Kazakh Institute of Agriculture which surveyed the 1956 potato plantings in the mountain areas of the Alma-Atinskaya and Taldy-Kurganskaya Oblasts determined that potatoes do not thrive at an altitude of 1800-2000 m above sea level. At the altitude of 1200 m in Taldy-Kurganskaya Oblast' signs of growth were noted only in 2% of the plants of quick ripening varieties (Rannyyaya Rosa and Epikur). In the foothill valleys 80% of the early varieties were afflicted with diseases,

Card 1/2

- 40 -

USSR/Cultivated Plants - Potatoes. Vegetables. Melons.

Abs Jour : Ref Zhur Biol., No 12, 1958, 53614

M

as were 40-50% of the medium-ripening varieties.  
The expedition discovered considerable land areas  
suitable for the development of mountain potato seed  
growing. -- G.N. Chernov

Card#2/2

BOBROV, L., mladshiy nauchnyy sotrudnik

"The last of the Mohicans" of the Mendeleev periodic table,  
Tekh.mol. 29 no.10:32 '61. (MIRA 14:10)

1. Institut fizicheskoy khimii AN SSSR.  
(Periodic law)

BOBROV, L., nauchnyy sotrudnik

Blue ghost. Tekh.mol. 29 no.4:24-26 Ap 161. (MIRA 14:5)

1. Institut fizicheskoy khimii AN SSSR.  
(Smog)

BOBROV, I.

Pure substance. Nauka i zhizn' 28 no.10:40-46 o '61.

1. Nauchnyy sotrudnik Instituta fizicheskoy khimii AN SSSR.  
(Chemicals--Purification) (MIRA 15:1)

BOBROV, L., nauchnyy sotrudnik

Physical face of Mendeleev's table. Nauk i zhizn' 29  
no.2:64b-64c F '62.

(MIRA 15:3)

1. Institut fizicheskoy khimii AN SSSR.  
(Chemical elements)

BOBROV, L.; VASILEVSKIY, V.; VLASOV, L.; DRAGUNOV, E.; KAPUSTINSKAYA, K.;  
KARELIN, V.; LOSHCHILOV, G.; MAKARENKA, A.; MEDVEDEV, Yul.;  
ROMAN'KOV, Yu.: SENCHENKOVA, T.; SENCHENKOV, A.; TRIFONOV, D.;  
ANTOYUK, L., red.; LESHCINSKAYA, G., tekhn. red.

[Journey into the land of the elements] Puteshestvie v stranu  
elementov. [By] L.Bobrov i dr. Moskva, "Molodaia gvardiia,"  
1963. 366 p. (MIRA 16:10)

(Chemical elements)

BOBROV, L. G.

Bobrov, L. G.

"Keeping seed potatoes until the summer planting season under the conditions of the Alma-Ata suburban zone." Sci Res Inst of Farming imeni V. R. Vil'yams. Kazakh Affiliate VASHKhNIL. Alma-Ata Vegetable and Fruit Experimental Station. Alma-Ata, 1956 (Dissertation for the degree of Candidate in Agricultural Sciences)

Knizhnaya letopis  
No. 15, 1956. Moscow

BOBROV, L. G.

485

Sposoby khraneniya semennogo kartofelya.  
Alma-Ata. 1954. 16 s. 20 sm. (M-Vo sel'skogo  
khozyaystva kaiSSR. Glav. upr. sel'khozpropagandy).  
7.000ekz. Bespl.- / 54-55292/ p 635.21: 631.563

SO: Knizhnaya Letopis, Vol. 1, 1955

BOBROV, L.

And then? Znan.-sila 38 no.6:16-17 Je '63.

(MIRA 16:8)

(Earth)

BOBROV, L. S.      Capt.- Lieutenant

"The Accuracy of Magnetic Compass Installed on a ski-sled used to move  
Troops over Ice," Morskoy Sbornik, No. 1, Jan'44

TI 076358

BOBROV, L.S.

Observations on temperature and humidity in the auditoriums of certain theaters in Moscow. Gig.i san. no.7:46 Jl '53. (MLRA 6:7)

1. Moskovskaya gorodskaya sanitarno-epidemiologicheskaya stantsiya.  
(Theaters—Sanitation)

*Bobrov, L. S.*

Subject : USSR/Medicine

AID P - 2487

Card 1/1 Pub. 37 - 16/19

Authors : Goromosov, M. S., Bobrov, L. S., Galanin, N. F.,  
Shnitnikova, Z. Z., Ivachev, V. V.

Title : Activities of the All-Union Scientific Society of  
Hygienists

Periodical : Gig. i san., 7, 56-58, J1 1955

Abstract : An account of the Conference of the Board of the above  
society on February 16, 1955, and of the activities  
of the Moscow, Leningrad and Kazan branches in 1954-1955.

Institution: None

Submitted : No date

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

BOBROV, L.S., sanitarnyy vrach

Activities of the Moscow chapter of the All-Union Scientific Society of Hygienists. Gig. i san. 21 no.6:85-86 Je '56. (MLRA 9:8)  
(MOSCOW--PUBLIC HEALTH--SOCIETIES)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

BOBROV, L.S.; GABINOVA, Zh.L.; IZMEROV, N.F.

Organization and work of the air hygiene section at the health and epidemic control station. Zdrav.Ros.Feder. 2 no.6:21-23 Je '58.  
(MIRA 11:5)

1. Iz Moskovskoy gorodskoy sanitarno-epidemiologicheskoy stantsii.  
(AIR--POLUTION)

**BOBROV, L.S.**

Plenary session of the Moscow Branch of the Society of Hygienists.  
Gig. i san. 23 no.5:87 My'58  
(MIRA 11:6)  
(PUBLIC HEALTH--SOCIETIES)

BOBROV, L.S.

Activities of the Moscow section of the All-Union Society of  
Hygienists in 1957. Gig. i san. 23 no.7:92-93 J1 '58.

(MIRA 12:1)

(PUBLIC HEALTH SOCIETIES)

IOFA, B.Z.; BOBROV, L.V.; RATOV, A.N.

Certain properties of carrier-free radioactive lanthanum  
and bismuth in water-dioxane solutions. Radiokhimiia 1  
no.6:674-678 '59. (MIRA 13:4)  
(Lanthanum--Isotopes) (Bismuth--Isotopes)  
(Dioxane)



"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

BOBROV, L.V.; TAMBIYEV, A.Kh.

Diego factor and anthropology. Priroda, 50 no.8:98-99 Ag '61.  
(MIRA 14:7)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.  
(Antigens and antibodies) (Anthropology)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

BOBROV, Lev Viktorovich; ANTONYUK, L., red.

[Through the eyes of Monge-Berthollet] Glazarni Monzha-Bertolle. Moskva, Molodaia gvardiia, 1964. 318 p.  
(MIRA 18:3)

BOBROV, Lev Viktorovich; MEL'NIKOVA, Zh.M., red.

[Mathematics of molecules] Matematika molekul. Moskva,  
Znanie, 1965. 67 p. (Novoe v zhizni, nauke, tekhnike.  
IX Seriya: Khimiia, no.9) (MIRA 18:8)

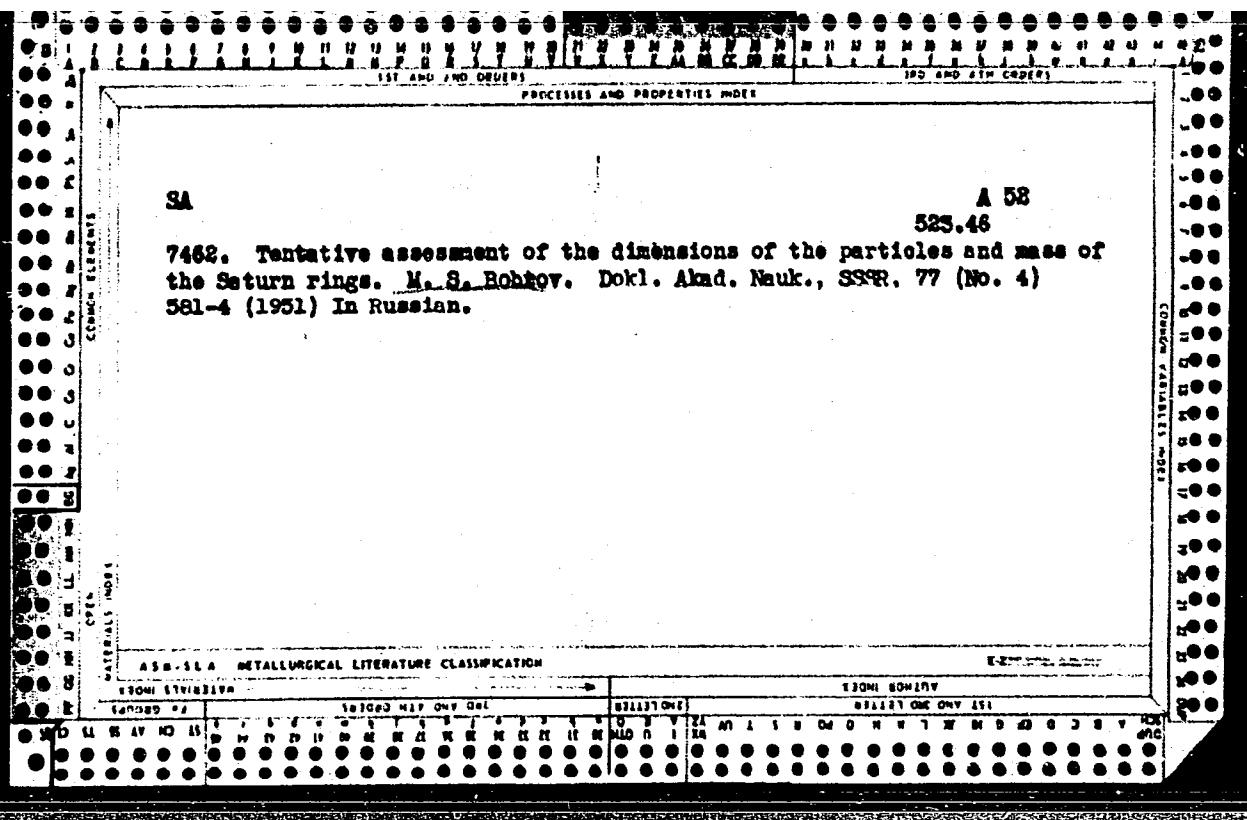
BOBROV, M.P.

Concerning M.S. TSirul'nikov's article "Uterus-preserving surgery in atonic hemorrhage". Akush. i gin. 40 no.1:147 Ja-F '64. (MIR 17:8)

1. Akushersko-ginekologicheskoye otdeleniye (zav. M.P. Bobrov) Zheleznodorozhnoy bol'nitsy imeni K.E. Tsiolkovskogo, Kaluga.

BOBROV, M.

"Physical Interpretation of the Phase Curve of Saturn's rings"  
Astron. Zhur., 17, no. 6, 1940 (Submitted Sept 1939)



USSR/Astrocyomy - Solar Systems Saturn May/Jun 52

"Structure of Saturn's Rings. I. Degree of Roughness and Albedo of the Particles of Ring B,"  
M. S. Bobrov

"Astron Zhur" Vol XXIX, No 3, pp 334-340

Basic results of investigation were already published (see "Dok Ak Nauk SSSR" Vol LXXVII, 4, 1951). In this part the radius-vector of indicatrix of scattering of Saturn's ring B in direction of incident light is determined by comparing

BOBROV, M. S.

217E53

217E53

exptl and theoretical results computed according to the theory of V. A. Ambartsumyan and V. V. Sobolev. The deg. of roughness and the albedo of the ring particles are evaluated. Received 2 Jun 51.

BOBROV, M. S.

AID - P-61

Subject : USSR/Astronomy  
Card : 1/1  
Author : Bobrov, M. S.  
Title : On the Composition of Saturn's Rings. II - Evaluation of the Density by Volume of Ring B  
Periodical : Astron. zhur., V. XXXI, 1, 41-50, Ja - F 1954  
Abstract : This second part of Bobrov's work (the first part was published in Ibid, 29, 334, 1952) covers the theoretical computation of the surface brightness of a flat layer of macroscopic particles in two phases. From the observed ratio of the brightnesses of the phases the volume density of Saturn's B ring is deducted. Four diagrams illustrate the article, which is based on the works of H. Seeliger, Acad., V. G. Fesenkov, Acad., G. A. Shayn, E. Hertzsprung, and E. Schoenberg. The bibliography gives 14 references (6 Russian).  
Institution : None  
Submitted : May 5, 1953

BOBROV, M.S.

Thickness of Saturn's rings. Astron. zhur. 33 no.2:161-172 Mr-Ap '56.  
(MLRA 9:8)

(Saturn (Planet)--Ring system)

BOBROV, M.S.

Structure of Saturn's rings. Part 3. Estimating the dimensions of  
the particles and the mass of the rings [with summary in English].  
Astron.zhur.33 no.6:904-911 N-D '56. (MLRA 10:1)  
(Saturn (Planet)--Ring system)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6

BOBROV, M. S.,

"The Inhomogeneities of Solar Corpuscular Streams,"

paper presented at the IAU General Assembly, Moscow, Aug 1958.

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000205620019-6"

3(1)

AUTHOR:

Bobrov, M.S.

SOV/33-36-1-16/31

TITLE:

Deduction of the Theoretical Phase Function of the Brightness  
of Saturn's Rings and its Comparison With Observations

PERIODICAL: Astronomicheskiy zhurnal, 1959, Vol 36, Nr 1, pp 129-133 (USSR)

ABSTRACT:

The author derives a formula expressing the dependence between  
the surface brightness of a flat layer composed of macroscopic  
spherical particles and the phase angle during the illumination  
of the layer by a distant source of finite angular dimensions.  
The influence of diffraction is assumed to be negligibly small.  
The author applies the results to the B-ring of Saturn and shows  
that the theoretical phase curve agrees well with the data of  
observation due to E.Schoenberg and V.N.Lebedinets. L.P.Svetlova  
had a share in some calculations.  
There are 2 figures, 2 tables, and 8 references, 3 of which are  
Soviet, 4 German, and 1 American.

SUBMITTED: May 6, 1958

Card 1/1

81835

S/033/60/037/03/003/027  
E032/E314

3.9100

AUTHOR: Bobrov, M.S.

TITLE: Types of Irregular Geomagnetic Disturbances and the  
Mechanism of Interaction of Solar Corpuscular Streams  
with the Outer Atmosphere ✓PERIODICAL: Astronomicheskiy zhurnal, 1960, Vol 37, NO 3, pp 410-424  
(USSR)

ABSTRACT: Analysis of magnetograms obtained during the IGY corresponding to  $K_p$  between 0 and 9 shows that there are three independent although simultaneous types of geomagnetic disturbances  $D_i$ , namely, synphase (S), local (L) and permanent (P). Some of the characteristics of these types were reported previously (Ref 1). In the present paper, a more detailed quantitative analysis is given of the possible mechanisms giving rise to these disturbances in connection with the interaction between solar corpuscular streams and the Earth. S-disturbances (Figures 2-4) prevail in the S-belt. The northern (southern) boundary of the S-belt is at a distance of 2 500 km from the northern (southern) auroral zone (Figure 1).

Card1/4

81835

S/033/60/037/03/003/027

E032/E314

Types of Irregular Geomagnetic Disturbances and the Mechanism of  
Interaction of Solar Corpuscular Streams with the Outer Atmosphere

The S-disturbances are of the order of 50-200 γ . As a rule, their H- and Z-components are positive. It is very probable that they are due to compression of the outer atmosphere by large (~ 600 terrestrial radii) condensations of solar plasma. This compression is propagated hydromagnetically through the atmosphere, producing a positive S peak in low and middle latitudes. Simultaneously, transverse (Alfvén) waves should be propagated along the lines of force towards the auroral zones, giving rise to modified disturbances (S') having a relatively complicated structure. These S'-disturbances were actually detected on IGY magnetograms by the present author (Figure 5). L-disturbances (Figure 6) prevail in L-belts adjoining the S-belts and extend to the outer boundary of the nearest polar cap. The properties of these disturbances are well known (intensity up to 2 000 γ , decreasing with the distance R from the auroral zone; night maximum; in most cases a negative horizontal component; existence of well-pronounced quiet intervals between groups of peaks). They are probably

Card2/4

✓